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ABSTRACT

Although the freshman research paper is the most institutionalized single writing assignment in the academy, the body of knowledge about it is neither extensive nor reflective. This paper explores the complex processes involved in a freshman writing student's inquiry and composing processes as he/she enacts a research assignment. It asks how a student initiates an inquiry task and selects, gathers, organizes, and makes meaning as he/she composes from source materials. It also asks whether the use of a Research Journal would influence the writing of the paper. The study takes a comprehensive look at the ways a freshman interprets and negotiates the research assignment while trying to integrate information from sources with ideas of his/her own independent of the syllabus in which the assignment was originally structured. The thinking processes of one particular student are examined from a number of perspectives, drawing on think-aloud protocols, interviews, and the student's self-analysis. It was found that significant relationships between the processes exist; features such as goals and planning are important variables in the relationship between inquiry and composing. Evidence of a high level of personal involvement, imagination, cognitive awareness, and conscious choice of strategies emerged from the data taken from the Research Journal written by the student. The writing process in this study is viewed as problem-solving in which ideas are drafted, explored, reviewed, revised, edited, and polished for different ends. The underlying assumption is that writing is a process that can help students discover and make meaning, and it is suggested that teachers might contemplate the ways in which inquiry and composing, in combination, can forge new theoretical and pedagogical directions for a genre of writing that is taught in 84% of the nation's colleges and universities. (NH)

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Research: Recording Process and Product

By Dr. Fran O'Byrne Pelham

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Researchers and teachers have criticized the teaching of the research paper, in part, for being unrelated to writing. Some teachers spend countless hours instructing students on the research paper with the aim of improving writing, research, and thinking abilities, and in the goal of stimulating original thinking and writing. Although the freshman research paper is the most institutionalized single writing assignment in the academy, we do not know, in fact, whether the traditional research paper is effective or significant in teaching writing. Yet, the research paper in general is the only assignment specifically required in each section of freshman composition (Mc Donald, 1990).

The body of knowledge on the resarch paper is neither extensive nor reflective. The studies of prescription have been large; studies consisting of observation have been small. The close observation of a student writing a research paper has not commanded attention or research. One pedagogical implication of my study suggests that students have been given research paper assignments primarily oriented toward product rather than process.

It is not difficult to speculate about the influcence of process oriented inquiry with regard to a student's completion of a successful research paper. The results of this naturalistic study suggest that a link exists between a student fulfilling process-oriented research paper assignments that acknowledge various cognitive levels, and the achievement by the student of successful, original resarch paper writing. Furthermore, the inclusion of a Research Journal and its role in planning, drafting, and reflecting point to a student learning various cognitive processes as the research assignments vary.

The Research Journal in this study revealed how a student elaborated the research material into a draft. The journal also recorded the step-by-step process of the ways the student gathered information and transferred it to a composing task. Each inquiry event was recorded in the journal followed by prewriting for a draft. The journal was required in the course to encourage organization of material and careful documentation procedures, and to record

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student thoughts and responses.

This paper begins with several questions: What mental behaviours are present in the inquiry and composing processes of a freshman writing student as he/she enacts a research assignment? What composing and inquiry patterns of behavior will emerge as a student negotiates research paper assignments? How does the student approach the tasks of inquiry and composing? What commonalities or contrasts, if any, are present in the inquiry and composing processes as a student works through a research assignment and, in turn, writes a text? Lastly, would a Research Journal influence the writing of a research paper?

This study made an investigation of the mental behaviors of a writing student and elicited 16 behaviors. The purpose of eliciting the behaviors was to understand the student's experience of the inquiry and composing processes in negotiating a research paper assignment. The following methods were employed to reveal the student's interpretation of his experience in the inquiry and composing tasks: protocol analysis, (audiotaping of thoughts), interviews, conferences, and the analysis of essays and related assignments. The interview crystallized the student's thoughts. He referred to his research and writing experiences as a "maze." A model of his process was drawn from his interview statements (See Figure 1). The maze indicates a journey beginning with confidence, interrupted by confusion and obstructions, and regaining the confidence with decision making. Scattered throughout the maze is a counterpoint of gathering sources, organizing them, attending to bibliographic detail, questioning the author's stance, and creating new ways of looking at his biographical study.

Little attention has been given to collaborative sharing of the research process. Pianko (1979) found that the difference between good writers and poor ones is the capacity to reflect on what is written. Weak writers she argues, need to be shown the process of reflecting. Moore (1991) argues that "A teacher needs to create a community of student researchers. Students need an

audience that includes their peers as well as their teacher throughout their research process. By verbalizing their newly acquired knowledge, students' ideas start crystallizing and becoming their own rather than belonging to some unknown author" (8).

Successful student researchers are described as having teachers who "intervened in one or more stages of the process, providing advice, guidelines, or requirements that affected how students completed the assignment" (Nelson and Hayes, 1988, p. 11).

An excerpt from a think aloud protocol provides insight into the way a student negotiates barriers in his research: "I have just hit a stumbling point because I have looked in Appleton's Encyclopedia as told me by the Biography and Geneology Master Index. Rockefeller does not seem to be here." After double checking his sources, the student discovered that the original citation was incorrect. I counted 11 times in the protocol transcripts where the student was frustrated in his initial attempts in research. The protocols, however, indicate this student was aware of options to overcome the many barriers he encountered: "I'll ask the librarian," "I'll go back and check the computer again," "I'll talk to my professor in conference tomorrow," "I'll talk to the other students."

The think aloud transcripts indicate strong planning in both inquiry and composing tasks: "The next short paragraph will deal with the muckrakers who wrote harsh and unfair things." Further on in his Research Journal the student writes, "The next paragraph I want to use as a transition between the first development of the the Standard Oil Company and the second development of Rockefeller's continued and widespread philanthropy."

Even in closure, planning plays a significant role: "And this is the end of my paper. However, the final aspect of the paper will be to tie two developments of Rockefeller's life to make it clearer. My peer editor said something was foggy here."

What do the findings of this study suggest to teachers who assign inquiry and composing tasks? What function do the processes serve? The purpose for which Anthony researched and wrote affected his motivation and his success. Presenting research assignments that move from concrete to abstract can help students develop the ability to draw inferences, make discoveries, formulate comparisons and create metaphors. Initially structuring assignments in the syllabus, yet allowing independence in both the inquiry and composing processes empowers a student to negotiate those complex processes in a meaningful way. Also, explicitily requiring a variety of research tools and using full technology helps students become knowledgeable about a way of learning through writing a research paper. It is important to recognize that one student's way of learning differs widely from the next. By teaching our students to be introspective about their inquiry process we can empower them to discover ideas in order to write original research papers and help them further their cognitive abilities. Inquiry and composing can be the most significant processes in every subject area. Studying the strategies students employ in inquiry and composing can help us to understand better how students compose a research paper and help those students become better researchers, thinkers, and writers.

The need to learn how to learn within each discipline in the curriculum is important for students; they need to be aware of how to indentify a need for information. Students need to locate, select, and gather relevant information and apply this information to resolve an issue or problem under question. These skills are learned through application and practice within different areas of the curriculum. To accomplish this goal it is necessary to emphasize teaching students how to integrate the processes so as to write effectively. Students need to be able to proceed according to individual differences and learning styles in the inquiry process. This flexible pedagogical approach encourages learners to achieve and to become familiarized with a wide range of learning tools.

The Research Journal is a powerful tool, one that allows a student to reflect

on research and make discoveries that lead to inventive essays. Students make conections in the journal that enable them to write original and critical academic prose. In my current Writing II class, the 1993 freshmen are making connections among their research readings. I applaud the inquiry and composing efforts of these young scholars. One student researching the life of Frederic Banting discusses the impact of Banting's discovery of insulin in relation to Bobby Clarke of the Philadelphia Flyers team. Additionally, because of his research, the student says he is more informed about the diabetes he developed at the age of sixteen. Another student has drawn John Coltrane's saxophone in her Research Journal overlaying the instrument with the story of the musician's life. Another student is pleased to read that the person she is researching, Maya Angelou, will be reading her poetry at President Clinton's Inauguration. As teachers of writing we can shape research paper assignments that encourage students to critically interpret source material and to create research papers relevant to today's world.

The expectation that students' composing would be enriched by the collection of data in the Research Journal remains crucial. Teacher dissatisfaction with research papers is often due to plagiarism. In my experience, the Research Journal eliminates this problem. Sources, quotations, paraphrases, and inventive thinking can be routinely traced to their origins via the Research Journal. As the students and I conference together, the journey of each manifests itself clearly and eloquently in their journals.

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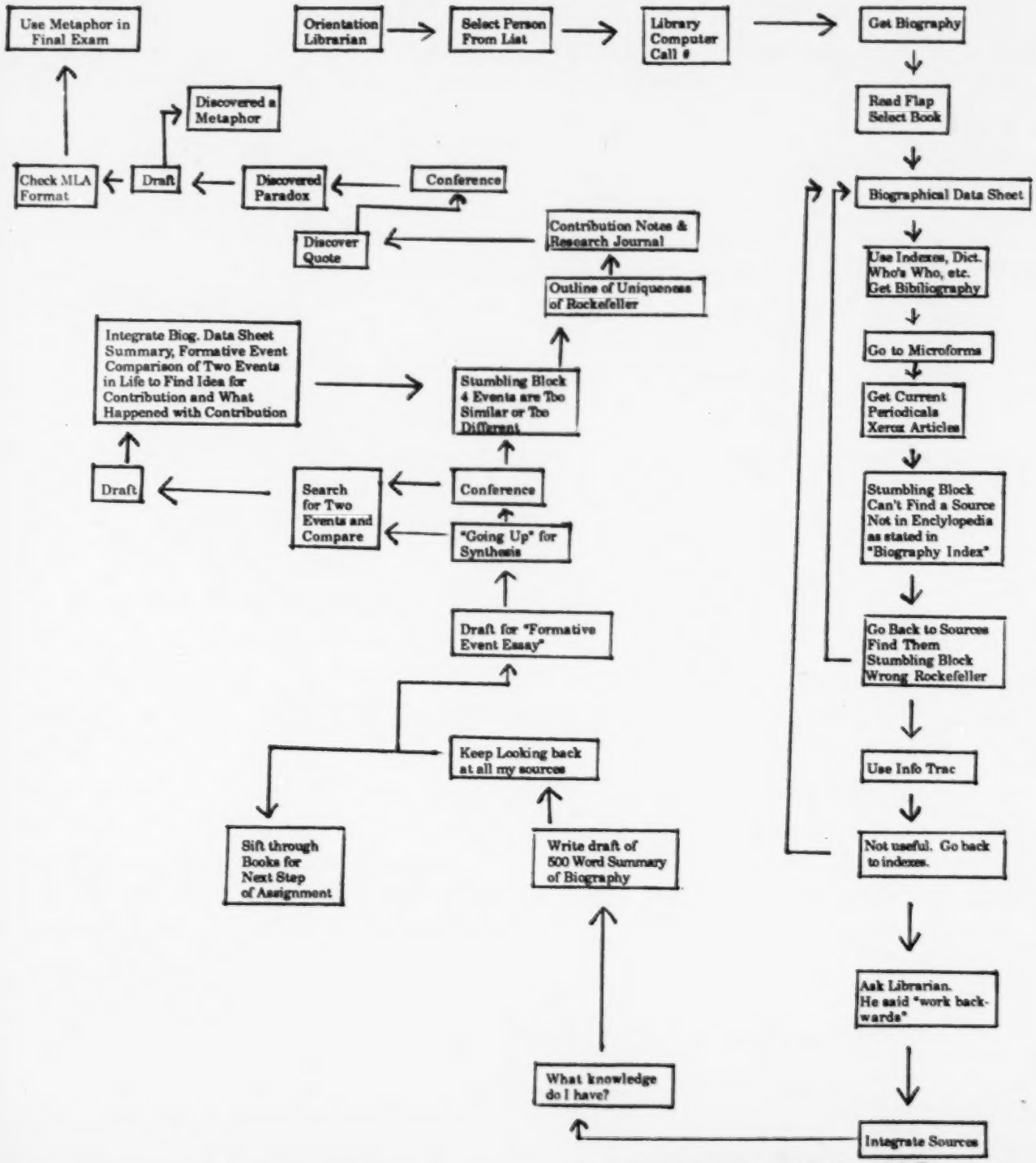
FIGURE 1

ANTHONY'S MAZE - INQUIRY AND COMPOSING PROCESSES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Biographical Data Sheet
Use Indexes, Dict. Who's Who, etc. Get Bibiliography
Go to Microforms
Get Current Periodicals Xerox Articles
Stumbling Block Can't Find a Source Not in Enclylopedia as stated in "Biography Index"
Go Back to Sources Find Them Stumbling Block Wrong Rockefeller
Use Info Trac
Not useful. Go back to indexes.
Ask Librarian. He said "work backwards"
Integrate Sources
What knowledge do I have?
Write draft of 500 Word Summary of Biography
Keep Looking back at all my sources
Sift through Books for Next Step of Assignment
Draft for "Formative Event Essay"
"Going Up" for Synthesis
Conference
Search for Two Events and Compare
Draft
Integrate Biog. Data Sheet Summary, Formative Event Comparison of Two Events in Life to Find Idea for Contribution and What Happened with Contribution
Stumbling Block 4 Events are Too Similar or Too Different
Outline of Uniqueness of Rockefeller
Contribution Notes & Research Journal
Discover Quote
Conference
Discovered Paradox
Draft
Check MLA Format
Discovered a Metaphor

35 STAGES FROM ORIENTATION TO FINAL EXAM

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ABSTRACT

This paper explores the complex processes involved in one student's inquiry and composing processes: how a student initiates an inquiry task and selects, gathers, organizes, and makes meaning as he composes from source materials. The goal of this study is to take an unusually comprehensive look at the ways a freshman interprets and negotiates a research paper assignment while trying to integrate information from sources with ideas of his own under the guidance of a syllabus whose purpose is to encourage cognitive and creative growth in writing. The thinking processes of one student from a number of perspectives are examined, drawing on think-aloud protocols, interviews, and a student's self-analysis. Significant relationships between the processes exists; features such as goals and planning are important variables in the relationship between inquiry and composing. Evidence of a high level of personal involvement, imagination, cognitive awareness, and conscious choice of strategies emerged from the data taken from the Research Journal written by the student.

Teachers might want to consider these relationships as they assign the research paper. The unarticulated processes--those which do not appear in a final product go unnoticed by the teacher, yet are fruitful for the development of the student's text.

The writing process in this study is viewed as problem-solving in which ideas are drafted, explored, reviewed, revised, edited, and polished for different ends. The underlying assumption is that writing is a process that can help students discover and make meaning. Inquiry, for the most part, has been product oriented, and has yet to achieve, in combination with composing, such pedigree.

Calls for changes in ways of thinking may encourage teachers to contemplate the ways in which inquiry and composing, in combination, can be viewed for forging new theoretical and pedagogical directions for a genre of writing that is taught in 84% of the nation's colleges and universities.